

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

[e1] 1. (Currently amended) A method of operation of a source node for selecting a restoration path in a mesh telecommunication network having a plurality of nodes comprising the steps of:

sending a first message along a service path to the a destination node;

receiving, in response to the first message, a second message from the destination node via a return path, the second message containing an array representing storing a restoration link capacity needed on for each link in the return path not in the service path over possible failures of the service path, wherein at least some of the nodes in the return path update the array upon receipt of the second message link information used to compute the array is distributed among a plurality of nodes in the network along a path of the second message;

using the array to selecting a restoration path through the network from the source node to the destination node using the array; and
reserving resources for the restoration path in the network.

[e2] 2. (Currently amended) The invention method of claim 1 wherein the link information distributed among the plurality of nodes array comprises a matrix representing storing the a restoration link capacity needed on a link when a possible failure occurs.

[e3] 3. (Currently amended) The invention method of claim 2 wherein the restoration link capacity on a link may be is shared by non-simultaneous failures.

[e4]4. (Currently amended) The invention method of claim 3 further comprising the step of sending a third message to update the array link information distributed among the plurality of nodes.

[e5]5. (Currently amended) The invention method of claim 4 wherein the resources for the restoration path are reserved by sending a fourth message along the restoration path to the destination node in the network.

[e6]6. (Currently amended) The invention method of claim 5 wherein the service path is set_up by nodes along the service path in the network as the first message traverses each of the nodes along the service path.

[e7]7. (Currently amended) The invention method of claim 6 wherein the nodes in the network are cross-connects.

[e8]8. (Currently amended) The invention method of claim 7 wherein the nodes in the network are optical cross-connects.

[e9]9. (Currently amended) The invention method of claim 8 wherein possible failures are defined by shared risk link groups.

[e10]10. (Currently amended) The invention method of claim 9 wherein rows of the matrix representing storing restoration link capacity are stored in master nodes of shared risk link groups.

[e11]11. (Currently amended) The invention method of claim 10 wherein columns of the matrix representing storing restoration link capacity are stored in master nodes of links in the network.

[c12] - [c19] (Canceled)